REMARKS

1. STATUS OF THE CLAIMS

Claims 1-19 were originally filed. Claims 1-6 and 15-19 were previously withdrawn as being directed to a non-elected invention. Therefore, Claims 7-14 are currently under examination.

Claim 7 has been amended by canceling reference to Claim 1, and replacing it with a recitation of the limitations of Claim 1 in step a)i) of amended Claim 7. Claim 7 has also been amended to recite the same elements of originally filed Claim 7 a) in amended steps a)ii and a)iii). Claim 7 has been further amended by replacing the mis-spelled term "RelBêB" with the correctly spelled term "RelBκB." Support is at numerous locations of the Specification that expressly use the correctly spelled "RelBκB" in each and every statement that refers to binding to RelB RHD, such as the Specification's paragraph bridging pages 4-5; page 40, lines 9-18; page 41, lines 12-14; page 6, lines 14-17; page 44, lines 7-8; page 44, lines 15-16; page 45, lines 8-9; page 45, lines 20-21; page 50, lines 3-11; page 50, lines 14-17; page 51, lines 13-16; page 52, lines 4-6; page 52, lines 26-28; paragraph bridging pages 52-53; page 56, lines 4-7; and page 57, lines 22-26. This support is further discussed below under item 5.A.

Claim 13 has been amended by adding numerals (i.e., (a), (b), (c), etc.) to the recited "protein."

Claim 14 has been amended by replacing the mis-spelled term "consensus-êB sequence" with the correctly spelled term "consensus-κB sequence." Support is at numerous locations of the Specification that expressly use the correctly spelled "consensus-κB sequence" in each and every statement that refers to the sequence that is listed in Claim 14 as 5'-GGGACTTTCC-3' (SEQ ID NO:58), such as the Specification's page 4, lines 9-13; page 5, lines 24-27; page 49, lines 16-20; and page 55, lines 26-30. This support is further discussed below under item 5.B.

Claim amendments were made to describe particular embodiments of the invention, notwithstanding Applicants' belief that the cancelled and unamended claims would have been allowable, without acquiescing to any of the Examiner's arguments, and without waiving the right to prosecute the unamended (or similar) claims in another application, but rather for the purpose of furthering Applicants' business goals and expediting the patent application process in

a manner consistent with the PTO's Patent Business Goals (PBG).[1]

2. SPECIFICATION – SEQUENCE LISTING

The Examiner requested compliance "with the requirements of sequence rules (37 CFR 1.821 – 1.825) before the application can be examined under 35 U.S.C. §§ 131 and 132."[2]

Applicants provide as a separate part of the disclosure, a "Sequence Listing" pursuant to 37 C.F.R. §§ 1.821-1.825.

Enclosed as part of this response is a Sequence Listing in paper copy and in an ASCII text file format entitled "10835_ST25.txt," created on June 04, 2010, consisting of 145,442 bytes. The contents of the enclosed paper copy and ASCII text file are the same and include no new matter.

3. SPECIFICATION - HYPERLINK

The Examiner objected to the Specification for containing a hyperlink and/or other form of browser-executable code.[3] Applicants have amended the specification by deleting the hyperlink, thereby overcoming this objection.

4. OBJECTION TO CLAIMS 7-14

Claims 7-14 were objected to since "Claim 7 depends from claim 1 which has been withdrawn."[4] Claim 7 has been amended by incorporating the limitations of withdrawn Claim 1, thereby making this objection moot.

5. REJECTION OF CLAIMS 7-14 UNDER 35 U.S.C. §112, SECOND PARAGRAPH (INDEFINITENESS)

Claims 7-14 stand rejected under 35 U.S.C. §112, second paragraph, for alleged indefiniteness.[5] Applicants respectfully traverse because one skilled in the art understands the bounds of the claims in light of specification. Under the law,

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1 65 Fed. Reg. 54603 (September 8, 2000).
2 Office Action, page 2, 4th paragraph.
3 Office Action, page 2, last paragraph.
4 Office Action, page 3, 1st paragraph.
5 Office Action, page 3, 4th paragraph.

> "the test for definiteness is whether one skilled in the art would understand the bounds of the claim when read in light of the specification. If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, §112 demands no more."[6]

Each of the rejected terms is definite, as further explained below.

A. "RelBêB sequence" of Claim 7

The Examiner argued that the term "RelBêB sequence" of Claim 7 is indefinite because the "specification does not describe any RelBêB nucleic acid or amino acid sequence."[7] Applicants respectfully disagree because one of skill in the art would understand from the specification that this term reflects a typographical error, and that the correct term is "**RelBκB sequence**."

In particular, the Specification teaches, **almost verbatim**, the language of the originally filed Claim 7 using the **correct spelling** of "RelBκB sequence." Indeed, this verbatim teaching was expressly made not just once, but **twice**, as follows:

> "Also provided by the invention is a method for identifying one or more test compounds that alters binding of RelB Rel homology domain (RelB RHD) with a **RelBκB sequence**, comprising: a) contacting i) the isolated nucleotide sequence of the invention, wherein SEQ ID NO:57 is operably linked to a nucleic acid sequence encoding a reporter molecule with ii) a polypeptide comprising RelB Rel homology domain (RelB RHD) listed as SEQ ID NO:62 such that the SEQ ID NO:62 specifically binds with SEQ ID NO:57, wherein the contacting is in the presence and absence of the one or more test compounds; b) detecting an altered level of expression of the reporter molecule in the presence of the one or more test compounds compared to in the absence of the one or more test compounds, thereby identifying the one or more test compounds as altering

6 *Miles Labs., Inc. v. Shandon Inc.*, 997 F.2d 870, 875 (Fed. Cir. 1993) (internal citations omitted), cert. denied, 510 U.S 1100, 127 L. Ed. 2d 232, 114 S. Ct. 943 (1994).

7 Office Action, page 3

binding of RelB Rel homology domain (RelB RHD) with a **RelBκB sequence**."[8]

"The invention further provides methods for identifying one or more test compounds that alter binding of RelB Rel homology domain (RelB RHD) with a **RelBκB sequence** of the present invention. In one embodiment, the invention's methods comprise: a) contacting i) the isolated nucleotide sequence comprising RelBκB sequences described *supra* with ii) a polypeptide comprising RelB RHD, as exemplified by SEQ ID NO:62, in the presence and absence of the one or more test compounds; and detecting altered specific binding of the nucleotide sequence with RelB RHD, as exemplified by SEQ ID NO:62, in the presence of the one or more test compounds compared to in the absence of the one or more test compounds, and c) identifying the one or more test compounds as altering binding of RelB RHD with a **RelBκB sequence**."[9]

Further support is at numerous locations in the Specification, in which **every** teaching of the recited binding to RelB RHD uses the **correctly spelled term "RelBκB sequence,"** such as:

"In one preferred embodiment, the agent that alters binding of RelB RHD with a **RelBκB sequence** is an antibody, such as RelB RHD antibody, and/or RelBκB sequence antibody."[10]

"In an alternative embodiment, the agent that alters the level of binding of RelB RHD with a **RelBκB sequence** is a nucleic acid sequence."[11]

"In one embodiment, the agent that alters the level of binding of RelB RHD with a **RelBκB sequence** is an antisense nucleic acid sequence."[12]

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8 (Emphasis added) Specification, paragraph bridging pages 4-5.
9 (Emphasis added) Specification, page 40, lines 9-18. See also Specification, paragraph bridging pages 52-53.
10 (Emphasis added) Specification, page 41, lines 12-14.
11 (Emphasis added) Specification, page 44, lines 7-8.

"In some alternative embodiments, the agent that alters the level of binding of RelB RHD with a **RelBκB sequence** is a ribozyme nucleic acid sequence."[13]

"Molecules which find use as agents for specifically altering the level of specific binding of RelB RHD with a **RelBκB sequence** include organic molecules, inorganic molecules, and libraries of any type of molecule, which can be screened using a method of the invention, and which may be prepared using methods known in the art."[14]

"In a preferred embodiment, detecting the level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, employs arrays, electrophoretic mobility shift assay (EMSA), immunoprecipitation, ELISA, footprinting assay, reporter gene assay, optical affinity biosensor system assays and the like. One of skill in the art that these exemplary methods are also useful for detecting specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, are also useful in screening test compounds that alter such binding."[15]

"The level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, may be determined using an "array", *i.e.*, a plurality (*i.e.*, more than one) of reaction compartments."[16]

"The level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, may be determined using electrophoretic mobility shift assays, also known as gel retardation assays."[17]

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12 (Emphasis added) Specification, page 44, lines 15-16.
13 (Emphasis added) Specification, page 45, lines 8-9.
14 (Emphasis added) Specification, page 45, lines 20-21.
15 (Emphasis added) Specification, page 50, lines 3-11.
16 (Emphasis added) Specification, page 50, lines 14-17.
17 (Emphasis added) Specification, page 51, lines 13-16.

"The level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, may be determined using footprinting assays."[18]

"The level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, may be determined using reporter gene assays."[19]

"The level of specific binding of the isolated nucleotide sequence that contains the invention's **RelBκB sequences** (*e.g.*, SEQ ID NO:57) with the protein RelB RHD, as exemplified by SEQ ID NO:62, may be determined using optical affinity biosensor system (OABS) assays."[20]

"The invention additionally provides a method for altering symptoms of an IKKα related pathology comprising administering to a mammalian subject one or more compounds that alters binding of RelB Rel homology domain (RelB RHD) with a **RelBκB** sequence."[21]

In view of the above-discussed teachings of the Specification that expressly use the correctly spelled "RelBκB sequences" in each and every statement that refers to binding to RelB RHD, one of skill in the art would unambiguously understand that Claim 7's term "RelBêB sequence" is mis-spelled, and that the correct spelling is "RelBκB sequences." In view of this, and in view of the instant amendment of Claim 7 that replaces the mis-spelled term "RelBêB" with the correctly spelled term "RelBκB," any alleged ambiguity is moot.

B. "A polypeptide comprising RelB RHD listed as SEQ ID NO:62" of Claim 7

The Examiner argued that Claim 7's term "polypeptide comprising RelB RHD listed as SEQ ID NO:62" is indefinite because "the specification does not provide any description of the

18 (Emphasis added) Specification, page 52, lines 4-6.
19 (Emphasis added) Specification, page 52, lines 26-28.
20 (Emphasis added) Specification, page 56, lines 4-7.
21 (Emphasis added) Specification, page 6, lines 14-17. See also Specification, page 57, lines 22-26.

actual sequence represented by SEQ ID NO:62."[22] However, the Examiner appears to have inadvertently overlooked the Specification's following express teaching of the actual sequence listed as SEQ ID NO:62:

> "wherein the isolated sequence specifically binds with a polypeptide sequence comprising RelB Rel homology domain (RHD), which is exemplified by SEQ ID NO:62, *i.e.*, amino acids 1-400 of the exemplary mouse RelB shown in Figure 13, GenBank accession A42023."[23]

In view of the above teaching by the Specification, the term "polypeptide comprising RelB RHD listed as SEQ ID NO:62" is clear.

C. "RelA Rel homology domain (RelA RHD) listed as SEQ ID NO:65, RelA, p50, RelA:p50, p52, RelA:p52, RelB RHD, RelB, and RelB:p50" of Claim 13

The Examiner argued that Claim 13's "recitation of 'RelA Rel homology domain listed as SEQ ID NO: 65, RelA, p50. . .' renders that claim indefinite because the nature of the SEQ ID NO: 65 is unknown."[24] This is inaccurate, as the Specification expressly teaches the actual sequence listed as SEQ ID NO:65, as follows:

> "RelA RHD (SEQ ID NO:65, *i.e.*, residues 19-291 of GenBank accession M61909 shown in Figure 20)."[25]

Since the sequence of SEQ ID NO:65 is shown in Figure 20, SEQ ID NO:65 is clear.

The Examiner also argued that "it is unclear how RelA Rel homology domain can be listed as other protein such as RelA, p50 ..."[26] However, Claim 13 recites RelA RHD as one example of the recited protein. Further clarity is provided by the instant amendment by adding numerals (i.e., (a), (b), (c), etc.) to the recited "protein," thus avoiding potentially arguable ambiguity.

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22 Office Action, page 3, 5th paragraph.
23 Specification, page 76, lines 8-9.
24 Office Action, page 3, last paragraph.
25 Specification, page 76, lines 13-14.

D. "Consensus-êB sequence" of Claim 14

The Examiner rejected Claim 14 on the basis that "the word 'consensus-êB sequence' renders the claim indefinite because the specification does not describe such a sequence with this name."[27] Applicants respectfully disagree because one of skill in the art would understand from the specification that this term reflects a typographical error, and that the correct term is "**consensus-κB sequence**."

In particular, Claim 14 recites that the mis-spelled term "consensus-êB sequence" refers to "5'-GGGACTTTCC-3' (SEQ ID NO:58)." The Specification teaches, **almost verbatim**, the language of the originally filed Claim 14 using the **correct spelling** of "**consensus-κB sequence**." Indeed, this verbatim teaching was expressly made not just once, but **twice**, as follows:

> "In yet another alternative, the method further comprises detecting unaltered binding of an isolated nucleotide sequence comprising the **consensus-κB sequence** 5'-GGGACTTTCC-3' (SEQ ID NO:58) to a polypeptide comprising one or more of RelB RHD listed as SEQ ID NO:62, and RelB in the presence of the one or more test compounds."[28]

> "In a further comprising detecting unaltered binding of an isolated nucleotide sequence comprising the **consensus-κB sequence** 5'-GGGACTTTCC-3' (SEQ ID NO:58) to a polypeptide comprising one or more of RelB RHD listed as SEQ ID NO:62, and RelB in the presence of the one or more test compounds."[29]

Yet more support is found at multiple locations in the Specification, wherein **every** teaching of the sequence that is listed as 5'-GGGACTTTCC-3' (SEQ ID NO:58) uses the **correctly spelled term "consensus-κB sequence**," such as:

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26 Office Action, page 3, last paragraph.
27 Office Action, page 4, 1st paragraph.
28 (Emphasis added) Specification, page 4, lines 9-13
29 (Emphasis added) Specification, page 5, lines 24-27.

"Thus, the method further comprises detecting unaltered binding of an isolated nucleotide sequence comprising the **consensus-κB sequence** 5'-GGGACTTTCC-3' (SEQ ID NO:58) to a polypeptide comprising one or more of RelB RHD, as exemplified by SEQ ID NO:62, and RelB in the presence of the one or more test compounds."[30]

"Alternatively, one control involves using the consensus-κB sequence by detecting unaltered binding of an isolated nucleotide sequence comprising the **consensus-κB sequence** 5'-GGGACTTTCC-3' (SEQ ID NO:58) to a polypeptide comprising one or more of RelB RHD, as exemplified by SEQ ID NO:62, and RelB in the presence of the one or more test compounds."[31]

From the above-discussed teachings of the Specification that expressly use the correctly spelled "consensus-κB sequence" in each and every statement that refers to the sequence that is listed in Claim 14 as 5'-GGGACTTTCC-3' (SEQ ID NO:58), one of skill in the art would unmistakably understand that Claim 14's term "consensus-êB sequence" is mis-spelled, and that the correct spelling is "consensus-κB sequence." In view of this, and in view of the instant amendment that replaces Claim 14's mis-spelled term "consensus-êB sequence" with the correctly spelled term "consensus-κB sequence," any perceived ambiguity is overcome.

E. "RelB RHD listed as SEQ ID NO:62" of Claim 14

The Examiner rejected Claim 14 on the ground that "the recitation of 'one or more of RelB RHD listed as SEQ ID NO: 62' renders the claim indefinite because the nature of the sequence is unknown."[32] Applicants respectfully traverse because, as discussed *supra* under item 5.B., the Specification expressly provides the actual sequence listed as SEQ ID NO:62:

"wherein the isolated sequence specifically binds with a polypeptide sequence comprising RelB Rel homology domain (RHD), which is exemplified by SEQ ID NO:62, *i.e.*, amino acids 1-400 of the exemplary mouse RelB shown in Figure 13, GenBank accession

30 (Emphasis added) Specification, page 49, lines 16-20.
31 (Emphasis added) Specification, page 55, lines 26-30.
32 Office Action, page 4, 1st paragraph.

A42023."[33]

Since the sequence of SEQ ID NO:62 is shown in Figure 13, SEQ ID NO:62 is clear.

In view of the above, Applicants aver that one skilled in the art understands the meaning of each of the terms of the claims in light of specification. Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of Claims 7-14 under 35 U.S.C. §112, second paragraph, for alleged indefiniteness.

CONCLUSION

Applicants respectfully request reconsideration of the application in view of the above, which places the claims in condition for allowance. To expedite prosecution, Applicants also respectfully invite the Examiner to call the undersigned before drafting another written communication, if any.

The Commissioner is authorized to charge any fees associated with this communication, or credit any overpayments, to Deposit Account No. 08-1290.

Respectfully submitted,

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33 Specification, page 76, lines 8-9.